

*Helicarion heteroconcha*, nov. sp. Pl. II. fig. 8.

Testa valde depressa, peripheriâ ovali, tenuis, diaphana, subtus membranacea, luteo cornea, versus aperturam viridicans, polita, arcuatim obsolete striata, versus aperturam irregulariter subcostulata. Spira planata, apice vix exserto. Anfractus 3, rapide accrescentes; ultimus dilatatus vix descendens. Sutura subimpressa, albido marginata. Apertura perobliqua, oblongo-ovata. Peristomatis margo anterior antice valde arcuatus; margo dexter subundulatus; margo basalis membranaceus.

Diam. major 17, minor 11 mm., axis 5 mm.

Aperturæ alt. 8, lat. 11 mm.

Habitat apud Darjeeling.

This very pretty shell is very distinct from any species hitherto described from Northern India. It is probably allied to some of the Ceylon species which like it have a membranaceous base. I have had the specimens for some years in my collection. They were, I believe, obtained by Mr. W. S. Atkinson.



ON SOME NEW OR IMPERFECTLY KNOWN INDIAN PLANTS, (continuation from Journal, Vol. XXXIX, part 2, pp. 61—91),—by S. KURZ, Esq.

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*DILLENIA CEE.*1. *DILLENIA PARVIFLORA*, Griff., (Not. Dicot., 704.)

Arbor vasta; folia oblongo-lanceolata, acuta v. breviter acuminata, longe et graciliter petiolata, repando-dentata, supra scaberrima, subtus dense tomentosa; flores mediocres, pedunculis longis tomentosis, vulgo ebracteatis, 2-4—nis, e ramulis verruciformibus orientibus sustenti; sepala dense pubescentia; staminum series interior exteriore duplo longior; styli carpellaque 5—7.—Pegu, Yomah (Dr. Brandis).

This is a very distinct species, very much resembling in foliage *D. scabrella*, Roxb., but the flowers are quite different.

2. *DILLENIA SPECIOSA*, Griff. (Not. Dicot., 703, t. 649 f. 3) = *D. aurea*, Sm.

3. *Dillenia pulcherrima*, n. sp.

Arbor mediocris v. parva ; folia (etiam juvenilia) longiuscule petiolata, decidua, obovata v. oblonga, repando-dentata, obtusa v. subobtusa, glabra ; flores speciosi, lutei, longe stricteque pedunculati, solitarii, in ramulis anni præcedentis terminales ; series staminum interna externâ longior ; styli et carpella circiter 12 ; fructus calyce carnoso accreto inclusi, circ. 1½ poll. in diametro. Burma (Dr. Brandis).

Closely allied to *D. aurea*, but differing in the shape of the leaves and in the long, straight peduncles.

#### POLYGALEÆ.

4. *SKAPHIUM LANCEATUM*, Miq., (in Suppl. Flor. Sumatr. p. 357).—This supposed new genus is placed by Prof. Miquel in the THYMELÆACEÆ, but it is clearly a species of *Xanthophyllum* (ex affinitate *X. glauci*).

#### TERNSTRÆMIACEÆ.

5. *Pyrenaria camelliæflora*, n. sp.

Arbuscula, 25-30-pedalis, ramulis petiolisque dense pubescentibus ; offlia 4-5 poll. longa, oblonga v. elliptico-oblonga, utrinque subacuminata, breviter petiolata, (petiolis glabris v. puberulis), crenato-serrulata, basin et apicem versus integra, subcoriacea, glabra, subtus costâ magis minusve pubescentea, etiam in sicco lutescenti-viridia ; flores parviusculi, circiter 8 lin. in diametro, lactei (antheris aureis), in foliorum axillis subsessiles ; bracteolae parvae, unacum sepalis petalisque extus sericeae ; ovarium sericeum ; styli 5 ; drupae. . . .—Martaban, Doyokee pass, 4000 feet, (Dr. Brandis).

#### MALVACEÆ.

6. *Hibiscus sagittifolius*, n. sp.

Herba annua, erecta, scabriuscule pubescens, mox glabrescens, 1—3 pedalis ; folia valde variabilia, inferiora minora, lata, basi cordata v. truncata, superiora magna, saepius 6-7 poll. longa, oblongo-lanceolata v. linearia, basi valde hastata, acuminata, longe

petiolata (petioli raro laminae longitudinem attingentes, pubescentes), grosse crenato-dentata, supra glabra, subtus parce hispidula; flores circiter 2 poll. in diametro, pedicellis longis, scabro-hispidulis, petiolorum longitudine v. longioribus suffulti; involucrem e foliolis 7—11 linearibus hispidis, calycis spathacei decidui velutini longitudine, v. longioribus, compositum; capsulae oblongae, acuminatae, hispidae, 5-angulares.—Pegu. (Dr. Brandis).

7. *HIBISCUS VESTITUS*, Griff., (Not. Dicot. 519) = *H. vulpinus*, Bwdt.

#### STERCULIACEÆ.

8. *BUETTNERIA ANDAMANENSIS*, Kurz, (in Andam. Report, App. B., p. 3).

Frutex scandens, glaber, novellis parce puberulis; folia cordato-ovata, petiolis 3-5 pollicaribus, glabris v. subglabris, breviter 3—5-lobata, lobis acutis v. acuminatis, rarissime subintegra, acuminata, irregulariter et grosse dentata, membranacea, adulta utrinque glabra et vulgo secus costas paullum puberula, quoad valde juvenilia molliter pubescentia; flores graciliter pedicellati, cymas di-trichotomo-ramosas, minute puberulas, axillares formantes; capsulae globosae, cerasi magnitudine, glabrae, setis inaequali-longis, strictis, lævibus obtectæ.

Martaban, along the Thouigyeen and Attaran rivers (Dr. Brandis). Closely resembling in habit, &c., *B. pilosa*, Roxb., but it is quite glabrescent and the capsules are very different.

#### TILIACEÆ.

9. *Pentace Burmanica*, n. sp.

Arbor novellis puberulis v. pubescentibus?; folia oblonga v. ovato-oblonga, 4—6 poll. longa, basi rotundata v. obtusa et crasse 3-nervia, (cum nervis accessoriis 1 v. 2 tenuioribus), petiolati (petiolis  $\frac{1}{2}$ — $\frac{3}{4}$  poll. longis, glabrescentibus), acuminata, integra v. sinuata, chartacea, supra glabra et nitentia, subtus pallida et, præsertim secus nervos, parce puberula; flores iis *Berryi mollis* similes; pedicelli longiusculi, fulvo-tomentosi, paniculas terminales laxas dense fulvo-tomentosas formantes; calyx

5-fidus, circ. 2 lin. longus, extus tomentosus, lobis lanceolatis et subregularibus; petala obovato-oblonga, basi attenuata, lobis calycinis paululum longiora; stamina circiter 4—7, 5-delphi, phalanges cum staminodiis totidem lineari-subulatis alternantes; ovarium globosum, 5-lobum, tomentosum; capsulæ immaturæ 5-loculares et 5-alatæ, molliter fulvo-tomentellæ; valvæ alâ latâ apice truncatâ et angulatâ circumdatæ.—Martaban, Poungyee. (Dr. Brandis).

10. *Elæocarpus bracteatus*, n. sp.

Arbor magna, glabra, gemmis parce sericeis; folia obovato-oblonga v. obovata, 5-6 poll. longa, basin acuminatam versus attenuata, petiolata (petiolis  $\frac{1}{2}$ -1 poll. longis, glabris), obtusa v. obtuse apiculata, repando-dentata, coriacea, glaberrima; flores majusculi, albi; pedicelli pollicares, glabri, racemos glaberrimos bracteatos axillares formantes; bracteae foliaceae, obovatae, sessiles, glabrae, serrato dentatae,  $\frac{1}{3}$ -1 poll. longae, verosimiliter persistentes; sepala 6-7 lin. longa, lineari-lanceolata, acuminata, glabra, marginibus revolutis velutina; petala paululum longiora, cuneato-oblonga, bifida, (lobis fissis et subulato-ciliatis), extus parce sericea, intus secus margines revolutos sericeo-pubescentia; stamina numerosa; antherae aristâ subulatâ terminatae; ovarium sericeo-villosum; drupae pruni magnitudine, oblongae, laeves; putamen lacunosum et tuberculato-rugosum.—Martaban, Thoungyeen (Dr. Brandis).

*RUTACEÆ.*

11. *Evodia gracilis*, Kurz, (*Fagara triphylla*, Roxb., Fl. Ind. I, 416).

Fruticulus habitu *E. edulis*, Forst., gracilis, 3-5 pedalis, ramulis terretibus, novellis inflorescentiaque puberulis; folia 3-foliolata, (raro unum alterumve 1-foliatum,) opposita et subalterna, glabra; petiolis vix marginatis, glabris, 1-4 pollicaribus; foliola  $3\frac{1}{2}$ -4, non raro 5-7 poll. longa, lanceolata v. lato-lanceolata, utrinque acuminata, breviter petiolulata, chartacea; panicula contracta et petiolo communi multo brevior, puberula, glabrescens; flores parvi, albidii, pedicellis brevibus et gracilibus puberulis suffulti; petala 4, oblongo-lanceolata, acuta; ovarium puberulum, 4-loculare; carpella vulgo 4, matura 2-3 lin. longa, punctata, glabra; semina grani

*pipervis nigri* magnitudine, lucida, aterrima v. fusco-atra.—Burma, Karen hills, Taipo mountains, 3000 ft., (Dr. Brandis).

Roxburgh's plant has been wrongly identified with Loureiro's *Lepta triphylla*; it is quite a distinct species.

12. *GLYCOSMIS SAPINDOIDES*, Ldl., will probably turn out to be only a form of *G. chlorosperma*, Spreng.

#### OCHNACEÆ.

13. *OCHNA CROCEA*, Griff., (Not. Dicot., 463) = *Gomphia Sumatрана*, Jack.

#### MELIACEÆ.

14. *Schizochiton dysoxylifolium*, n. sp.

Arbor glabra; folia magna, pinnata, iis *Dysoxyl*i *acuminatissimi* simillima, rhachide glabrâ; foliola alterna, breviter et crasse petiolulata (petiolulis puberulis), parum inæqualia, oblonga, v. oblongo-lanceolata, acuminata, integra, subcoriacea, glabra, 10—12 poll. longa; flores 6 lin. circiter longi, tubulosi, subsessiles, bracteolâ parvâ lanceolatâ pubescente sustenti, breviter racemosi, paniculam magis minusve pubescentem formantes; calyx campanulatus, obsolete 4-dentatus, subtilissime pubescens; petala 6 lin. circiter longa, pubescentia, obovato-lineararia; staminum tubus styli longitudine, petalis a medio adnatus, adpresse flavescens pubescens, apice 6-fidus, lobis oblongis, obtusis, integris, glaberrimis; antherae 6, cum lobis alternantes; ovarium stylusque basin versus pubescens, capsulae...—Martaban, Thoungyeen. (Dr. Brandis).

#### RHAMNACEÆ.

15. *Gouania integrifolia*, n. sp.

Frutex magnus, scandens cirrhiferus, novellis dense ferrugineo-tomentosis v. villosis; folia cordato-ovata, 2½-3½ poll. longa, petiolis magis minusve tomentosis, 3 lin. usque ad pollicem fere longis, acuta v. acuminata, integerrima, supra brevè pubescentia, subtus dense fulvescenté (secus nervos ferrugineo-) pubescentia; racemi axillares et terminales, ferrugineo- v. fulvo-tomentosi, sæpius ad ramulorum extremitates paniculati; flores...; capsulae 3-4 lin. longæ, intra alas 3, rotundatas, glabras, minute puberulæ, 3-valves; semina in valvis solitaria.—Pegu, (Dr. Brandis).

The entire leaves (in absence of the flowers) readily distinguish this species from *G. Mauritiana*, Lamk.—*G. Javanica*, Miq., has quite glabrous fruits and coarsely serrate leaves, but I can find no specific distinction between it and *G. Mauritiana*; and I believe that Blume was quite right in identifying the former plant with the Mauritian species.

#### SAPINDACEÆ.

16. *Nephelium hypoleucum*, n. sp. (*Sapindaceæ*, No. 1, Griff., Not. Dicot., 550 ?).

Arbor mediocris, glabra, novellis ferrugineo-puberulis; folia impari-pinnata, rachide subterete glabrescente; foliola 6—10 poll. longa, oblongo v. ovato-lanceolata, vulgo parum obliqua, basi acuta, subcoriacea, acuminata, glabra, subtus glauca et inter nervos subtiliter et tenuiter reticulata; flores minuti, pedicellati, paniculam axillarem et terminalem fulvo-puberulam formantes; calyx puberulus, dentibus sæpe ciliatis; filamenta longa, præsertim basin versus pilosa; fructus bilobi, v. vulgo lobo altero abortivo, pruniformes, molliter muricati, purpurei, monospermi; semina arillo eduli succulento induta.—Pegu, (Dr. Brandis).

Very near to *N. chryseum*, Bl., but differing by the leaves.

#### ANACARDIACEÆ.

17. *Bouea Brandisiana*, n. sp.

Arbor glabra, novellis minute puberulis; folia lanceolata v. elliptico-lanceolata, longius v. brevius petiolata, longius v. brevius obtusiuscule acuminata, coriacea, in sicco opaca, nervis lateralibus utrinque impressis, glabra, novella subtus in nervis petiolisque puberula, mox glabrescentia; paniculæ magnæ, longe pedunculatæ, terminales, ramosæ, puberulæ, ramis pedunculoque 2-4—pollicari, glabrescentibus; flores iis *B. oppositifoliæ* majores, pedicellis 3 lin. longis, gracilibus, puberulis racemulosi; calyx minutus, puberulus, truncato-dentatus; petala obovato-oblonga, acutiuscula, lineâ longiora; stamina vulgo 8, omnia fertilia, filamentis brevibus filiformibus subpuberis; drupæ pruni majoris magnitudine, ovoideo-reniformes, læves, carnosæ, acidæ, purpurascenti-atræ?—Martaban, Thoungyeen, (Dr. Brandis).

18. *Semecarpus albescens*, n. sp.

Arbor magna, ramulis novellisque velutino-tomentosis; folia elongato-ovata v. cuneato-lanceolata, petiolis  $\frac{1}{2}$ -1 poll. longis, crassis, tomentosis, 7-12—pollicaria, breviter et obtusiuscule acuminata, basi angustatâ, vulgo cuneatâ, rotundata v. obtusa, integra, coriacea, supra nitentia et (costâ minute pubescente exceptâ) glabra, subtus tenuiter albotomentosa et parce pilosula; nervi (et reticulatio laxa) conspicui, flavescentes, pilosuli, nec tomentosi; flores parvi, pedicellis 1-2 lin. longis, dense pubescentibus, racemulosi, in paniculam terminalem dense fulvo-velutinam, foliis vulgo brevioribus, dispositi; calyx minutus, pubescens; petala valvata v. subvalvata, lineam circiter longa, brevi pubescentia; ovarium dense adpresse hirsutum, stigmatibus 3 crassis, glabris; discus glaber; stamina 5, filamentis brevibus latiusculis, vulgo 1-2 abortiva et longiora; nux...—Pegu, Moug Forests, (Dr. Brandis).

## LEGUMINOSÆ.

19. *Clanthus Binnendyckianus*, n. sp.

Herba perennis, erecta, ramosa, adpresse fulvo-villosa, ramis densius et patenter villosis; folia impari-pinnata, breviter petiolata, rachide fulvo-villosa; foliola 27-29, elliptica v. elliptico-oblonga, brevissime petiolulata, obtusa, mucronata, circ. 1 poll. longa, juniora dense et adpresse fulvo-villosa, dein supra parcius pubescentia; stipulæ subulato setaceæ, villosæ; racemi breviusculi, strictiusculi, axillares, longe pedunculati, folio vulgo longiores; bracteæ deciduæ, pollicem fere longæ, lineares, longissime subulato-acuminatæ, adpresse pubescentes; flores conspicui, mediocres, purpurei, pedicellis 4-5 lin. longis, fulvo-villosis, apice sub calyce bracteolas duas, lineari lanceolatas, calyce ipso paulo longiores gerentibus; calyx 2-2 $\frac{1}{2}$  lin. longus, fulvo-pubescentis, dentibus brevibus; carina  $\frac{3}{4}$  poll. longa, acuminata, vexillo reflexo longior; ovarium stylusque glaberrimus; legumen lineare, 3-3 $\frac{1}{2}$  poll. longum, breviuscule stipitatum, acuminatum, torulosum, coriaceum, nigrescens, glabrum, suturis incrassatis; semina nigra, circ. 2 lin. longa. Moluccos, Ceram. (Cult. in Hort. Bogor., et ab amiciss. Binnendyckio mecum communicata).

This plant resembles in habit *A. Dampieri*, but it is smaller in all parts and easily distinguished by the subulate bracts, etc. I have en-

tertained some doubts whether the species can belong to *Clianthus*, on account of the style not being bearded, but there are no other characters which could justify a separation from the genus.

#### ROSACEÆ.

20. PRUNUS JAVANICA, Miq.—To this species I add as synonyms *Prunus Junghuhniana* Miq., and *Prunus Martabanica*, Kurz, in Andam. Rep., Edit. secunda, p. 37.

21. PYGEUM PARVIFLORUM, T. et B., does not sufficiently differ from *P. arboreum*, Endl.

22. RUBUS GOWREEPHUL, Roxb., is identical with *R. flavus*, Ham.

*R. albescens* and *R. racemosus*, Roxb., as well as *R. Horsfieldii*, Miq., are all forms of *Rubus lasiocarpus*, Sm.

*R. rosæflorus*, Roxb., is *R. rosæfolius*, Sm., and

*R. paniculatus*, Roxb., is *R. fraxinifolius*, Poir.

#### CRASSULACEÆ.

23. BRYOPHYLLUM CALYGINUM, Salisb. This name must be changed, according to the laws of priority, in *B. pinnatum* (*Cotyledon pinnata*, Lamck., Enc. Meth., II, 141-1786).

#### HAMAMELIDEÆ.

24. LIQUIDAMBAR TRICUSPIS, Miq., is only a state of growth of *Bucklandia populnea*, R. Br. The leaves of the young shoots are usually lobed, those of the older ones often so, but rarely to an equal extent.

#### HALORAGEÆ.

25. MYRIOPHYLLUM INDICUM, Griff., (Not. Dicot., 687), is *M. tuberculatum*, Roxb.

#### COMBRETACEÆ.

26. COMBRETUM LEPIDOTUM, Prsl. (Walp. Ann., I, 290), is *C. squamosum*, Roxb.

*Comb. rotundifolium*, Roxb., and *C. Horsfieldii*, Miq., are both referable to *Comb. extensum*, Roxb.



27. LUMNITZERA COCCINEA, WA., is the same as *L. littorea*, Voigt, (Cat. Hort. Calcutt., 39;—*Pyrranthus littoreus*, Jack.).

MELASTOMACEÆ.

28. TREMBLEYA RHYNANTHERA, Griff., (Not. Dicot., 677), is identical with *Melastoma Malabathricum*, Linn.

29. *Allomorpha hispida*, n. sp.

Caules petiolique crassi, 5-pollicares, dense hispidi-setosi; folia magna, ovata v. ovalia, basi subcordata, longe petiolata, breviter acuminata, integra, 8-9 poll. longa, tenui coriacea, supra sparse, subtus, præsertim secus costas 9, densius setosa; paniculæ glabræ, vel ad nodos ramorum setosæ; flores tetrameri, parvi, pedicellis gracilibus, 2-3 lin. longis, fasciculos sessiles formantes; calyx 4-costatus, setis nonnullis longis instructus, brevi campanulatus et patens, dentibus minutis; petala obovata, circ. 2 lin. longa; stamina 8, antheræ connectivaque exappendiculata; ovarium fundo calycis basi tantum adnatum.—Burma, (Dr. Brandis).

30. SONERILA ANGUSTIFOLIA, Roxb., *S. emaculata*, Roxb., *S. secunda*, Wall., (Walp. Rep., V. 685) and *S. picta*, Griff. (Not. Dicot. 676, non Korth.), all appear to be varieties of *Sonerila maculata*, Roxb.

31. *Sonerila Brandisiana*, n. sp.

Herba erecta, humilis, caulibus valde crassis et robustis, 2-3 poll. tantum longis et 3-4 lin. crassis, brunneis, apice ramos 1 v. 2 laterales, crassos articulatos emittentibus; folia lanceolata, basi in petiolum breviora v. longiora attenuata, acuminatissima, remote et minute serrulata, flaccida et membranacea, glaberrima, supra maculis albis notata, 4-7 poll. longa; racemi foliis multo breviores, secundi, glabri; (flores desunt); capsulæ triquetrae, circ. 2½ lin. longæ, obovatæ, truncatæ, læves.—Martaban, Thoungyeen, (Dr. Brandis).

Evidently affined to *S. squarrosa*, although very different from it in habit and size.

32. *Sonerila amabilis*, n. sp.

Herbula 4-5-pollicaris, acaulis, parce pilosa; folia numerosa, radicalia, variabilia, petiolis 2-3-pollicaribus, pilosis suffulta,

cordato-ovata minora sæpe reniformia, nonnunquam apicem versus angulato producta, obtusa, 1-2 poll. longa, tenere membranacea, sæpius obsolete crenata, ciliata, utrinque pilis longiusculis adspersa; scapi plerumque solitarii, foliorum longitudine, sparse pilosi, teretes, apice umbellato 3-5-flori; flores intense rosei, conspicui, longiuscule pedicellati; bracteæ minutæ, ovatæ, acutæ; calyx obovatus, longiusculis subcrispis adspersus, circ. 2 lin. longus, lobis brevibus dentiformibus; petala oblonga, 3-3½ lin. longa, obtusa; antheræ ovatæ, acutæ, (haud prolongatæ uti in *S. scapiflora*, cui cæteris valde affinis), lineam tantum longæ; capsulæ calyce inclusæ, breves.—Sikkim-Himalaya, in shady, rocky places, in the Rangeet valley, at 4-5000 ft. elevation.

33. DISSOCHLETA ASTROSTICTA, Miq., (Suppl. Fl. Sumatr., 318), is *D. pallida*, Bl., perfectly agreeing with the Jackian plant from Singapore.

*D. Palembangica*, Miq., (l. c., 317), is identical with *D. pipericarpa*, Naud.

34. APTEUXIS TRINERVIS, Griff., (Not. Dicot., 672) is *Pternandra cærulescens*, Jack.

35. MEMEYCYLON HORSFIELDII, Miq., and *M. Lampongum*, Miq., (Suppl. Fl. Sumatr., 321) are synonyms of *M. Griffithianum*, Naud.

#### LYTHRARIÆ.

36. *Ammannia simpliciuscula*, n. sp.

Herbulæ decumbentes, basi repentes, radicanter, glabræ, 1-2½ poll. longæ, caulibus simpliciusculis, v. parce ramosis, filiformibus; folia opposita, oblonga v. oblongo-linearia, 2-5 lin. longa, superiora minora obovata, brevissime petiolata, obtusa, uninervia; flores minuti, coccinei, breviter graciliterque pedunculata, in axillis foliorum superiorum solitarii, vix ½ lin. in diametro; calyx truncato 4-denticulatus, hemisphericus; petala . . ?; stamina 4; capsula subglobosa, ½ lin. in diametro, rubra, 3-valvis, 1-ocularis, calyce duplo longior.

On muddy ground around ponds and in inundated rice-fields at Chittagong, rare. Fl. Octob.

This is the third Indian species of *Ammannia*, which I have described as new. It may be desirable to give a conspectus of the Eastern Indian species, in order to shew the relations of these 3 species to others.

A. Flowers solitary, (or seldom and only occasionally 2-3), sessile, or pedicelled, in the axils of the leaves, forming often spikes or racemes ; capsules 2-3—valved.

*a* Calyx campanulate, twice as long as broad ; capsules about half so long as the calyx-tube, enclosed.

(1.) Leaves very shortly petioled, 1-nerved, linear ; flowers solitary, sessile ; pygmæan plant, ..... *A. dentelloides*, Kurz.

(2.) Leaves usually sessile, strongly penninerved, obvate to oblong ; flowers sessile, forming lateral and terminal leafy or bracted spikes, ..... *A. peploides*, Spreng.

(3.) Leaves sessile, almost orbicular, penninerved ; flowers on slender short pedicels, forming shorter or longer slender racemes, ..... *A. subrotunda*, Wall.

(4.) Leaves sessile, orbicular or nearly so, penninerved ; flowers sessile in terminal peduncled, bracted, simple, or slightly compound, spikes, ..... *A. rotundifolia*, Buch.

*β* Calyx hemispherical, about as long as broad ; capsules protruding from the calyx, or at least as long as the calyx-tube.

(5.) Leaves linear, 1-nerved, very shortly petioled ; calyx 4-angular and 4-toothed, about  $\frac{1}{3}$ - $\frac{1}{5}$  lin. long ; no petals ; pygmæan herb, ..... *A. pygmæa*, Kurz.

(6.) Leaves oblong to linear-oblong, 1-nerved, very shortly petioled ; calyx not angular, 4-toothed, about  $\frac{1}{3}$  lin. long ; flowers very shortly peduncled ; pygmæan herb, ..... *A. simpliciuscula*, Kurz.

(7.) Leaves oblong to linear, sessile, 1-nerved or the lateral nerves very faint ; calyx usually 5-toothed, not angular,  $\frac{1}{2}$ -1 lin. long, petals 5, ..... *A. pentandra*, Roxb.

B. Flowers sessile or more usually pedicelled, axillary, clustered or in cymes, the latter sometimes reduced to a 3-to-1 flowered cyme ; capsules irregularly bursting.

(8.) Leaves narrowed at the base, petioled or sessile ; flowers minute, apetalous, on slender penicels, forming sessile or very shortly peduncled cymes or clusters, ..... *A. baccifera*, L.

(9.) Leaves sessile, with cordate, sagittate or dilate base ; petals present. Capsule under a line long ; stamens 4 or fewer ; petals flat ; calyx 4-toothed, without accessory teeth ; cymes slender, ..... *A. multiflora*, Roxb.

(10.) Capsule about  $1\frac{1}{2}$  lines long ; stamens 6—8 ; petals flat ; calyx 4-toothed, without accessory teeth ; cymes slender, ..... *A. auriculata*, Willd.

(11.) Capsule about 2 line long ; stamens 8 ; petals large, crimped ; calyx 4-toothed, with as many horn-like accessory teeth ; cymes and pedicels short, robust, ..... *A. octandra*, L. f.

37. AMELETIA ACUTIDENS, Miq., and *A. nana*, Roxb. (non. DC.) are both identical with *Ameletia Indica*, DC., now referred to *Ammannia peploides*, Spreng. (Syst. Veg., I, 444—1825 ;—*Peplis Indica*, Willd.).

38. AMMANNELLA LINEARIS, Miq., (Fl. Ind. Bat. I-1, 619, c. descriptione erronea), is identical with *Ammannia octandra*, L. f.

39. SUFFRENIA DICHOTOMA, Miq., is *Ammannia multiflora*, Roxb.

40. GRISLEA TOMENTOSA, Roxb. This name must be altered into *Woodfordia fruticosa*, (= *Lythrum fruticosum*, L., sp., pl. 641).

41. LAGERSTREMLIA REGINÆ, Roxb., (Corom. Pl., I, 46, t. 65,—1795). This name has to be replaced by the older one of Retzius, viz. *Lagerstromia flos-reginæ*, Retz., (Obs. Bot., I, 20,—1779).

42. SONNERATIA ALBA, Griff., (Not. Dicot., 652, non Sm.), is evidently a new species, very different from Smith's plant, and may be named *S. Griffithii*.

The species of *Sonneratia* may thus be distinguished.

A. Stigma infundibuliformi—capitatum, parvum ; calyx 6-8—lobatus ; folia lato-obovata.

(1.) Petala lineari-lanceolata, intense purpurea ; calyx teres, ..... *S. acida*.

Petala desunt.

(2.) Calyx in alabastro elliptico-oblongus, acutus ; tubus obsolete, dein manifeste 6-8—angulatus, ..... *S. alba*.

(3.) Calyx in alabastro ovoideus, obtusus ; tubus teres, *S. Griffithii*.

B. (4.) Stigma magnum, 3 lin. fere in diametro, fungiformis. calyx 4-lobatus ; petala nulla ; folia oblonga ad lanceolata, *S. apetala*.

#### ONAGRARIÆ.

43. JUSSLEA FLORIBUNDA, Griff., (Not. Dicot., 688) is the same as *J. repens*, L.

## MYRTACEÆ.

44. RHODAMNIA CINEREA, Griff., (Not. Dicot., 653 et Jack.); *Rh. concolor*, Miq., (Suppl. Fl. Sumatr., 315); *Rh. Nageli*, Miq., *Rh. subtriflora*, Bl. and *Rh. Muelleri*, Bl., all belong in my opinion to *Rhod. trinervia*, Bl.

45. NELITRIS PALLESCENS, Miq., (Suppl. Fl. Sumatr., 314), is identical with *N. paniculata*, Ldl.

## SAMYDACEÆ.

46. CASEARIA OVATA, Roxb., (Fl. Ind., II, 428, non Willd.) is to be retained as *C. Canziana*, Wall., (ap. Voigt. Cat. Hort. Calcutt., 78).

47. BLACKWELLIA sp., Griff., (Not. Dicot., 584, t. 585, A. f. 10,) is a new species, nearly allied to *Homalium fagifolium*, Bth., but differing from it by the flowers. The species may be called *Hom. Griffithianum*.

## CUCURBITACEÆ.

48. TRICHOSANTHES RENIFORMIS, Miq.

Herba perennis, gracilis, volubilis, pubescens, cirrhis bifidis, simplicibus; folia cordato-ovata v. lato-cordata, longiuscule petiolata, breviter cuspidata v. acuminata, basi sinuata, remote repando-dentata, 3-4 poll. longa, membranacea, utrinque brevi pubescentia v. puberula; juniora subtus molliter pubescentia; flores (in alabastro) virescente albidi; masculi pedicellati in racemum brevem corymbiformem, puberulum, breve ( $\frac{1}{2}$ - $\frac{2}{3}$  poll.) pedunculatum, axillarem collecti et basi pedicellorum bracteolâ minutâ caducâ instructi; feminei solitarii, pedunculis brevibus decurvis, puberulis, axillaribus; calycis lobi breves, subulati, reflexi; petala...; ovarium minute muricatum et puberulum, mox glabrescens; pepo ovali-oblonga, circ.  $1\frac{1}{2}$ -2 poll. longa, laevis v. apicem versus pubera, polysperma; semina pulpa nidulantia, planiusecula, lato 4-angularia, basi in tumorem latum planum producta, medio vitta prominente longitudinali percursa et lateribus prominentibus truncatis concavisque.—Sikkim-Himalaya.

49. SCOTANTHUS TUBIFLORUS, Naud., is to be referred to *Gymnopetalum Cochinchinense*, (*Bryonia Cochinchinensis*, Lour., Fl. Coch. 595).

50. *CUCUMIS INTEGRIFOLIUS*, Roxb., (Fl., III, 724) is *Gymnopetalum integrifolium*. I refer this species to *Gymnopetalum*, but as the petals are sometimes found jagged, it might also belong to a section of *Trichosanthes* which I call *Pseudo-Trichosanthes*. This section comprises the species of *Trichosanthes* with diœcious, solitary flowers, the females, having them on very short peduncles, or almost sessile, while the males are long and slender. The difference of *Trichosanthes* and *Gymnopetalum* appears to rest almost solely in the fringed or not fringed petals, a character to which hardly a generic value can be attached.

51. *MUCKIA SCABRELLA*, Arn., must be changed into *M. Maderaspatana*, (*Cucumis Maderaspatana*, L., sp. pl. 1438—non Roxb.).

52. *ALSOMITRA HETEROSPERMA*, Rœm. (Syn. monog., II, 118) is evidently a *Gomphogyne*, (= *Zanonia heterosperma*, Wall., in Miq. Fl. Ind. Bat., I-1, 683).

#### BEGONIACEÆ.

53. *BEGONIA POLYCARPA*, DC., is referable to *B. Roxburghii*, DC.

54. *Begonia Brandisiana*, n. sp.

Herba succulenta, subsimplex, subglabra, radice tuberosa; folia radicalia et simul caulina, quorum caulina multo minora et brevius petiolata, vulgo 5-loba, radicalia autem petiolis glabris 5-8 poll. longis suffulta, lato rotundata, basi sinuata v. subcordata, membranacea, vulgo 5—7 poll. longa et 6—8 poll. lata, glabra v. supra pilis minutis adspersa, palmato 5-7—nervia et profunde 5-7—loba, lobis acuminatis et obsolete repando-dentatis; flores minuti, albi, pedicellis capillaribus, cymas repetito dichotomas, multifloras, pedunculo longissimo plerumque radicali instructas, formantes; bracteæ minutæ, lanceolatæ, acutæ; sepala in utraque sexu 2, lato-rotundata, emarginata, lineam tantum longa et paululum latiora; petala nulla, antheræ numerosæ; oblongæ, mucronulatæ, filamentis brevibus liberis; styli 3, apice bifidi, lobis stigmaticis spatulato-dilatatis, glandulis pedicellatis ciliatisque vestitis; capsulæ 3-4 lin. longæ, glabræ, 3-loculares, ovatæ et acutæ, subæqualiter v. æqualiter 3-alatæ, alis oblongis et retrorse productis; placentæ indivisæ.—Martaban, Attaran valley (Dr. Brandis).

55. *Begonia surculigera*, n. sp.

Herba parva, succulenta, erecta, 4—6 poll. alta, caulibus glabris v. parce glanduloso-puberulis, basi sæpius surculos parvifoliatos tenues emittentibus; folia alterna, (petiolis 3-8 lin. longis glabris), oblique cordato-ovata, acuminata, minute obsoleteque setaceo-crenato-dentata et subciliolata, 1—3 poll. longa, membranacea, supra pilis brevibus crassis adspersa, subtus glabra v. secus costam parce pilosula; flores parvi, candidi, pedicellis laevibus capillaribus suffulti, cymam axillarem dichotomam glanduloso-puberulam formantes; bracteæ numerosæ, minutæ, oblongæ, acutæ, reflexæ; sepala fl. masc. oblongo-rotundata, circ. 2 lin. longa, extus hinc inde pilis nonnullis paleaceis adspersa; petala paululum minora; stamina monadelphæ, antheræ obovatæ, mucronulatæ; styli 3, graciles, liberi v. basi cohærentes, apice concavi et dilatati, glandulis stigmaticis villosomarginatis; capsulæ nutantes, ovales, acuminatæ, circ. 3 lin. longæ, glabræ, 3-loculares et 3-alatæ, alis semihastatis, inæquali-latis; placenta bifidæ.—Frequent on moist sandstone rocks, overgrown with mosses, in mixed and evergreen forests of the Akyab District, Arracan.—Fl. and fr. in Octob.

56. *Begonia modestiflora*, n. sp.

Herba erecta, simplex, glabra, radice tuberosâ, caulibus magis minusve angularibus, 1-2—pedalibus; folia alterna, valde oblique et profunde cordato-ovata, acuminata, petiolis 1—3 poll. longis glabris, palmato 7—9—nervia, 3—6 poll. longa, serrato-dentata, sæpius angulata v. sublobatâ, membranacea, supra lucida et pilis nonnullis brevibus crassis adspersa, subtus pallida et glabra; stipulæ subulatæ, parvæ; flores parvi, albi, pedicellis capillaribus instructi, in cymulas dichotomas graciles et vulgo foliolo lanceolato, v. lineari serrato, acuminatissimo, supportatas collecti atque paniculam terminalem elongatam, parvifoliatam, glabram, efformantes; bracteæ minutæ, lineari-lanceolatæ, vix  $\frac{3}{4}$  lin. longæ; sepala oblonga, obtusa, circ. 2 lin. longa; petala angustiora et duplo minora; stamina numerosa, libera; antheræ oblongæ, mucronatæ; styli 3, liberi, (apice clavato dilatato et concavo), glandulis stigmaticis marginati; capsulæ obovatæ, semipolli-

cem circiter longæ, glabræ, 3-loculares, inæqualiter 3-alatæ, alis apice horizontaliter truncatis, basi inæqualiter et acutiuscule productis; placentæ bifidæ.—Habitu *B. scutata*, Wall.—On sandstone rocks in the beds of hill streams on Boronga island, opposite Akyab, Arracan; occurring up to 1000 feet elevation.

57. *Begonia paleacea*, n. sp.

Herba erecta, humilis, simplex v. subsimplex, succulenta, radice tuberosa, caulibus, petiolis inflorescentiaque plus minus pilis paleaceis brevibus obtectis; folia solitaria ad apicem caulis v. prolifera, oblique cordato-rotundata, s. ovata, petiolis  $\frac{1}{2}$ -1 poll. longis, paleaceo-tomentosis, (nonnunquam cum caulibus confluentibus) suffulta, obtusa v. obtuse acuminata, integra v. grosse crenata, sæpe subtilissime ciliata, 3—6 poll. longa et longiora, membranacea, glabra v. nonnunquam supra, v. utrinque, papillosa, v. subtus secus nervos pilosa; stipulæ lanceolatæ, acuminatæ, pilosæ; flores parvi, albi, pedicellis capillaribus glanduloso-pubescentibus, in cymas longe pedunculatas, graciles, sed paucifloras, paleaceo-pilosas, e basi costæ foliorum ortas, dispositi; bracteæ flor. masc. magnæ et conspicuæ, 4 lin. fere longæ, lato-ovatae, obtusæ, glabræ, caducissimæ, eæ florum fem. minoræ, lanceolatae, acuminatæ, pilosæ et magis persistentes; sepala lato-rotundata, circ. 2 lin. longa, extus sparse pilosa, petala paulum minora; antheræ obovatae, emarginatæ, numerosæ, monadelphæ; styli 2, connatæ, breviter bilobæ; capsulæ circ. 5 lin. longæ, oblongæ, glabræ v. parce pilosæ, 2-loculares, 3-alatæ, alæ c.  $1\frac{1}{2}$  lin. latæ et apice truncatæ, v. ala media plerumque duplo latior; placentæ bifidæ.—Martaban, Attaran valley. (Dr. Brandis).

FICOIDEÆ.

58. TRYPERA, Bl.—I had some time ago identified this genus with *Mollugo Glinus*, A. Rich., which identification is also recorded by Zollinger in his "System. Verzeichniss der im Indischen Archipel gesammelten Pflanzen, 2 part, p. 141." The book has only very lately come into my hands.

UMBELLIFERÆ.

59. *Hydrocotyle Burmanica*, n. sp.

Herba repens, glabra, ramis adscendentibus; folia petiolis longis,



gracilibus, glabris, lato-cordata, 2-2½ poll. lata, (lobis subacuminatis et crenato-dentatis), membranacea, glabra, basi palmato 5-nervia ; stipulæ lato-rotundatæ, scariosæ ; flores minuti, numerosi, pedicellis filiformibus, circ. 1½-2 lin. longis, in umbellas oppositifolias, solitarias, longe pedunculatas, glabras, collecti ; fructus lato-didymi, mericarpia utrinque costâ unicâ prominente percursa.—Martaban, Daunat-toung, 3000 feet. (Dr. Brandis).

#### CORNACEÆ.

60. *STYRAX JAVANICUM*, Bl., (Bydr., 671,) is identical with *Marlea begoniæfolia*, Roxb.

61. *MARLEA VILLOSA*, (*Styrax villosum*, Bl., Bydr., 671 ; Miq. Fl. Ind. Bat., I-2, 464).

Arbuseula, ramulis fulvo-pubescentibus ; folia oblique lanceolata v. oblongo-lanceolata, basi acuta v. obtusiuscula, petiolis circ. 2 lin. longis, fulvo-pubescentibus, obtuse acuminata, 2—4 poll. longa, membranacea, integra, supra secus nervos puberula, subtus fulvescenti-pubescentia ; flores parvi, pedicellis 2 lin. longis suffulti, in racemos simplices subsecundos, adpresse fulvo-pubescentes, circ. ½ poll. longos, breviter pedunculatos, dispositi ; calycis limbus cyathiformis, lato 5-dentatus, unacum tubo ad basin 1-bracteolato, oblongo-cylindrico, adpresse pubescens ; corolla 5-petala, ¼ poll. longa, petalis 5-linearibus utrinque adpresse fulvo-pubescentibus ; stamina 5, filamenta fulvo-villosa, brevissima, antheris linearibus multoties breviora.—Cult. in Hort. Bogoriensi.

62. *Styrax rugosum*, n. sp.

Arbuseula ?, ramulis novellisque ferrugineo-floccoso tomentosis ; folia oblonga, petiolis ½ lin. longis, crassis, floccoso-tomentosis, basi obtusa, magis minusve acuminata, irregulariter serrata et nonnunquam sublobata, 1½-2½ poll. longa, supra rugosa et puberula, subtus molliter albescente-tomentosa ; flores mediocres, albi, pedunculis curvis crassis circ. 1 lin. longis, floccoso-tomentosis, suffulti, solitarii, axillares, et versus novellorum ramorum apicem racemum spurium foliatum formantes ; bracteæ calycis longitudine, lineari-subulatæ ; calyx albescenti-tomentellus, lateribus magis minusve ferrugineo-floccosus, vulgo spathaceus et

usque ad mediam partem fixus, irregulariter 5-dentatus, dentibus lineari-subulatis; corolla circ.  $\frac{3}{4}$  poll. longa, velutina, lobis oblongis obtusiusculis; filamenta ad basin latam albido-villosa.—Pegu, hills between Sittang and Salween, at 4000 feet elevation. (Dr. Brandis).

#### LORANTHACEÆ.

63. *LORANTHUS RACEMIFERUS*, Wall. ap. DC. (Prod., IV, 296) = *L. coccineus*, Jack.

*Lor. pallens*, Wall. ap. DC. (l. c., 297) = *L. sphaerocarpus*, Bl.

*Lor. carinatus*, Wall. ap. DC. (l. c., 296) = *L. ampullaceus*, Roxb.

*Lor. leptanthus*, Wall. ap. DC. (l. c., 299) = *L. pulverulentus*, Wall.

*Lor. rigidus*, Wall. ap. DC. (l. c., 298) and *farinosus*, Desr. (DC. l. c.) are both the same as *L. pentandrus*, L.

64. *Loranthus Siamensis*, n. sp.

Frutex parasiticus, ramis teretibus, junioribus novellisque ferrugineo-farinoso tomentellis, adultis lenticellis, corticosis, ferrugineis adpersis; folia opposita v. subopposita, ovata, basi subcordata v. rotundata, breviter (2-3 lin.) petiolata, obtuse acuminata v. apiculata, rarius subobtusata, integra, crassissime coriacea et præter costam obsoletam subavenia, juniora ferrugineo-farinoso, adulta magis minusve glabrata v. glabra, 2-3 poll. longa; flores... sessiles, spicas solitarias, v. binas,  $1\frac{1}{2}$ -2 poll. longas, dense ferrugineo-tomentosas, axillares formantes; bracteæ solitariæ, magnæ, ovario triplo longiores, elliptico-oblongæ, tomentosæ; calyx dense ferrugineo-tomentosus, limbo obsolete truncato; corolla extus tomento cum furfure mixto ochraceo v. ferrugineo induta, intus testaceo-tomentella, limbo 5-partito?; baccæ pisi minoris magnitudine, urceolato-ovatae, densissime fulvo v. subferrugineo tomentellæ, truncatae, bracteâ æquilongâ sustentæ.—Siam, Búkit Kethay, Kán-búri (Teysmann Herb. Bog. 6001.)—Near *L. tomentosus*, Heyne.

65. *Loranthus rhapalocarpus*, Kurz, (*Lor. cuneatus*, Wall. ap. DC., Prod., IV, 301, non Heyne).

Fruticulus densus parasiticus ramosissimus, 1-2 ped. altus, omnibus fere partibus subtiliter floccoso-lepidoto tomentellis;

folia parva, opposita v. alterna, obovato v. oblongo-cuneata, in petiolum brevem attenuata v. quandoque subsessilia, apice rotundata, integra, coriacea, nervis tenuibus per-cursa,  $1-1\frac{1}{2}$ , raro 2 poll. longa, dum juvenilia utrinque, subinde subtus tantum tenuiter furfuraceo-velutina v. glabrescentia; flores albidii,  $\frac{1}{2}-\frac{3}{4}$  poll. longi, dense testaceo-velutini et sublepidoti, pedicellis  $1-1\frac{1}{4}$  lin. longis, in cymulas 2-5—floras, testaceo-velutinas subsessiles, v. breviter pedunculatas, axillares dispositi; bracteae solitariae, minutae, subcucullatae; calycis tubus cylindrico-oblongus, dense testaceo-velutinus, limbus truncatus et paulum incrassatus; corollae tubus gracilis, curvulus, extus dense furfuraceo-tomentosus, limbus 4-fidus; stamina 4, antherae oblongae; baccae (adhuc immatura) elongatae, lineari-cuneatae, circ.  $\frac{1}{2}$  poll. longae, tenuiter testaceo v. ferrugineo-velutinae, basi supra bracteam minutam annulato-marginatae.—Frequent in Arracan, as in Koladyne District, especially on *Lagerstræmia*.

A. Pyr. de Candolle appears to have made a curious mistake in describing the linear club-shaped berries for a corolla, and in taking the elongate seed for a club-shaped style and anthers. No wonder, therefore, when he says: Antherae forte 5, sed in floribus junioribus (= baccis immaturis) obscurae, glutine viscoso inter se et cum stigmatibus concretæ. He evidently mistook also the short space between the annular thickening at the base of the berries and the bract for an ovary.

#### 66. *Loranthus Brandisianus*, n. sp.

Frutex parasiticus glaber; folia opposita s. subopposita, lanceolata ad elliptico-lanceolata, basi acuminata, (petiolis  $\frac{1}{3}$  ad  $\frac{1}{2}$  poll. longis crassis), longe acuminata, integra, crasse coriacea, (nervis lateralibus vix visibilibus), glabra, subtus pallida, sed non glauca; flores glabri, circ. pollic. longi v. paululum longiores, pedicellis  $2-2\frac{1}{2}$  lin. longis glabris, racemos cymosos pauciflores solitarios v. geminatos glabros axillares formantes; bractea bracteolæque laterales ovatae, acutae, basi connatae; alabastra 6-angulata; calyx glabra, tubus elliptico-oblongus, limbus truncatus; corolla glabra, circ. poll. longa, tubus a basi modice inflatus et ureolato-tubulosus, limbus profunde 6-fidus, lobis linearibus acutis, reflexis, fere tubi longitudinis; stamina 6, antherae

lineares ; stylus filamentaque glaberrima ; baccæ...—Karen-hills E. of Toung-hoo, on Taipo mountains, at 3000 feet elevation. (Dr. Brandis).

67. *Loranthus eleutheropetalus*, n. sp.

Frutex parasiticus, glaberrimus ; folia opposita v. subopposita, lanceolata ad elliptica et lineari-lanceolata, obtusa v. magis minusve obtuse acuminata, basi in petiolum  $\frac{1}{3}$ - $\frac{1}{2}$  poll. longum attenuata, integra, crasse coriacea et enervia, glabra, viridia ; flores (coccinei ?), glabri, c.  $1\frac{1}{2}$  poll. longi, pedicellis 2-2 $\frac{1}{2}$  lin. longis, patentibus, in racemos terminales et axillares laxissimos elongatos, sæpe 3-4 poll. longos, minute puberulos, mox glabrescentes, dispositi ; bractea lato cucullato-oblonga, obliqua, parviuscula ; bracteolæ nullæ ; calyx subtilissime puberulus, mox glabrescens, tubo cylindrico 2-2 $\frac{1}{2}$  lin. longo, limbo truncato ; corolla 6-petala, petalis in alabastro coherentibus dein liberis, anguste linearibus,  $1\frac{1}{3}$  poll. longis, erecto-patentibus et supra basin reflexis ; filamenta et stylus angulatus glabri ; antheræ elongato-linearæ, acuminatæ.—Pym Kyoung (Pywoon Choung ? in Pegu ? or in Martaban ?). (Dr. Brandis).

68. *VISCUM HELFERI*, Prsl. (Epim. Bot. 256) is *Ginalloa Helferi*. The species of the genus *Ginalloa* appear to have all a curious sheath-like thickening at the base of each joint, by which they are easily recognised. *G. spathulifolia*, Oliv. (*V. spathulifolium*, Thw.) appears to differ from *G. Helferi* only by narrower 3-nerved leaves. Another species of *Ginalloa* will be the *Viscum* from the Andamans, which I have incorrectly compared with *V. heteranthum*, Wall. Wallich's species is referred by Meissner to *Henslowia*.

69. *VISCUM MONILIFORME*, WA. (Prod., I, 380, non Bl. ; Wight Icon., t. 1018 et 1019). This species is (to judge from the citations of Wight's figures) referred by Mr. Bentham to *V. articulatum*, Burm., but I think the two differ from each other in structure, as well as in general habit.

*V. articulatum*, Burm. Articles slightly narrowed at the joints and not conspicuously dilated, longitudinally ribbed, each article placed at a right angle with the other and, therefore, decussately crossing each other, but twisted so as to appear in one plane. Those of the main branches, however, are in one plane as in the following.

*V. moniliforme*, Wight. Articles all in one plain and complanate, without any other rib but the median one, at their truncate joints dilated in a complanate cup, in which the flowers rest.

To the former (*V. articulatum*) belong also *Viscum moniliforme*, Bl., *V. elongatum*, Wall., *V. fragile*, Wall., *V. attenuatum*, DC., and *V. aphyllum*, Griff., (Not, Dicot. 634 t. 630).

#### SYMPLOCACEÆ.

70. *SYMPLOCOS ATTENUATA*, Wall., ap. DC. (Prod., VIII, 256) = *S. polycarpa*, Wall., ap. DC. (loc. cit.).—*S. Hamiltoniana*, Wall., DC. (loc. cit.) is *S. racemosa*, Roxb.—*S. iteophylla*, Miq. = *S. adenophylla*, Wall., ap. DC.—*S. Horsfieldiana*, Miq., in Suppl. Fl. Sumatr., 475, *S. rubiginosa*, Wall. ap. DC. and *S. ferruginea*, Roxb., are all to be referred to *S. Javanica* (*Dicalyx Javanicus*, Bl. 1, Bydr., 1117).

#### 71. *Symplocos sulcata*, n. sp.

Arbuseula novellis adpresse ferrugineo v. fulvescente pubescentibus; folia lanceolata ad elliptico-lanceolata, basi acuta, (petiolis 3-4 lin. longis crassis), acuminata, magis minusve crenato-serrulata v. integra, crasse chartacea, 5—7 poll. longa, supra lucida, glabra, subtus valide nervosa et laxe reticulata; flores parvi, lutei, subsessiles, in racemum simplicem ferrugineo-tomentosum, brevem, axillarem, collecti; bracteæ bracteolæque subæquales, obovato-lanceolatæ, acutæ, adpresse pubescentes, lineam fere longæ; calyx dense adpresse pubescens, lobis circ. lin. longis, ovato-lanceolatis, obtusiusculis; stamina numerosa, inæqualia, basi inserta; drupæ elliptico-oblongæ, pedicellis brevissimis, ( $\frac{1}{3}$  lin. long.), tomentosis, circ. 4-5 lin. longæ, sulcatæ, subglabræ, cyanescente-nigræ, calycis limbo coronatæ, putamen sulcatum durum 3-locularem includentes; embryo rectus.—Martaban, Daut pass, 4000 feet (Dr. Brandis). This species will range along with *S. racemosa*.

The genus *Symplocos*, the species of which are supposed to be very difficultly to distinguish, might perhaps be divided in the following way:—

Subg. 1. *Alstonia*, DC.—Corollar-lobes twice as many as calyx-lobes, in 2 rows (American).

Subg. 2. *Hopea*, DC.—Corollar-lobes as many as calyx-lobes, in a single row.

\* Ovary 3-celled. Drupes oblong to elliptical, 3-celled. Embryo straight.

\*\* Ovary 2, rarely 3-celled. Drupes ovoid and contracted at top or turbinate, by abortion usually 1-seeded, often the mass of the endocarp protruding inwards so as to cause the seed (as in *MENISPERMACEÆ*) to be more or less horse-shoe-shaped. Embryo curved.

### MYRSINEACEÆ.

72. *MÆSA GLABRA*, Roxb. and *M. Sumatrana*, Scheff., (Comment. Myrsin. 15), are both referable to *M. ramentacea*, Roxb.

73. *Mæsa permollis*, n. sp.

Fruticulus subsimplex 6-10 ped., altus, ferrugineo molli-pubescentibus; folia ampla, lato oblonga v. lato-elliptica, (petiolis  $\frac{1}{2}$ -1 poll. longis, dense ferrugineo-pubescentibus), breviter et tenuiter acuminata, 6-8 poll. longa, sinuato-dentata, crasse membranacea, supra sparse et inconspicue, subtus molliter, pubescentia, nervis validis in denticula callosa excurrentibus percursa; flores albi, minuti, 5-meri, pedicellis brevissimis, breviter racemosi v. subfasciculati v. in paniculam contractam dense ferrugineo-tomentosam, axillarem, petiolo brevioram, contracti; bracteæ minutæ, pedicellis breviores; calyx pedicellis longior, dense ferrugineo-pubescentibus, lobis ovatis acutis; corolla tubuloso-campanulata, glabra, calyce circiter duplo longior, lobis brevissimis, rotundatis, quorum 4 patentes, quinto superiori inclinato, ovarium subinferior; stylus brevis atque crassus, stigmatibus indistincte lobato coronatus.—Martaban, Thoungyeen. (Dr. Brandis).

74. *Embelia sessiliflora*, n. sp.

Frutex scandens ramulis brunneis lævibus, novellis minute puberulis; folia ovato-oblonga ad oblonga, obtusiuscule apiculata, (petiolis 2 lin. longis, callosa-subdentatis), pergamacea, integra, 2-4 poll. longa, glabra, nervis etc. uti in *E. Ribes*; flores minuti, albi, sessiles v. subsessiles, basi bracteâ lineari-subulatâ puberula, floris totius v. calycis longitudine supportata, in spicas graciles paniculatas, axillares et terminales

conescenti-velutinas dispositi ; calyx puberulus, lobis triangularibus acutis ; petala crassa, minute puberula, oblonga, obtusiuscula, lineam fere longa ; stamina petalis breviora, filamenta crassa, puberula, antherarum longitudine.—Pegu (Karen hills ?), (Dr. Brandis).

This species agrees in many respects with *E. Ribes*, Burm., but differs from it by the sessile or nearly sessile flowers.

75. *EMBELIA GARCINIÆFOLIA*, Miq., (Pl. Jungh., 187 ; Scheff Comm. Myrs., 40,) is *E. floribunda*, Wall.

*E. picta*, Wall. ap. DC. does not differ from *E. robusta*, Roxb.

*E. ferruginea*, Wall. ap. DC. is hardly different from *E. villosa*, Wall., a species so nearly allied to *E. robusta*, Roxb., as to make it not improbable that both are only varieties of one and the same species.

76. *MYRSINE MYRTILLUS*, Hook., (Icon. Pl., t. 825 ; Walp. Ann. V, 473), is evidently an *Embelia*.

77. *Ardisia Brandisiana*, n. sp.

Frutex v. suffrutex ? ramis crassiusculis et succulentis, indistincte lepidotulis ; folia oblonga v. elliptico-oblonga, petiolis  $\frac{2}{3}$  ad poll. longis, crassis, basi inæqualia et acuta, obtusa, 5-6 poll. longa, undulato-repanda, pergamacea, glabra, nervis lateralibus tenuibus et parallelo-curvis, vix visibilibus, percursa ; flores conspicui, pedicellis pollicaribus, minute puberulis, sursum incrassatis, racemum umbelliformem axillarem, pedunculo 3-4 poll. longo, nudo, instructum, formantes ; calyx subglaber, lobis circ. 2 lin. longis, ovato-oblongis, acutis, membranaceis ; corollæ lobi sepalis plusquam duplo longiores, ovati, acuminati.—Burma, along a choung near Toumbjotseik (?) growing up to an elevation of nearly 50 feet, Salween. (Dr. Brandis).

78. *ARDISIA POLYSTICTA*, Miq., (Suppl. Fl. Sumatr., I, 576 ; Scheff. Comm. Myrs., 75) which Dr. Scheffer declares to be well distinguishable from *A. crispa* DC., by the compound inflorescences and rather long peduncled umbels, is nothing but one of those frequent forms of *A. crispa*, which have the peduncles growing out into additional peduncled umbels, as is for inst. clearly shown in Bot. Reg. t. 533, sub *A. lentiginosa*.

79. *Ardisia involucrata*, n. sp.

Frutex glaber, habitu *A. humilis*; folia obovata ad obovato-lanceolata, basi in petiolum brevissimum attenuata, breviter acuminate v. subapiculata, 4-5 poll. longa, pergamacea, glabra, nervis lateralibus tenuibus, iis *A. humilis* persimilibus percursa; flores majusculi, cereacei, intense rosei v. purpurei, pedicellis crassis  $\frac{1}{2}$ -1 poll. longis, dein elongatis, suffulti, racemos umbelliformes glabros, pedicellorum basi involucratos, longiuscule pedunculatos, axillares v. subterminales formantes; involucri bracteae conspicuae, purpureae v. roseae, pedicellorum longitudine, ovato-oblongae, acutiusculae; calycis glabri laciniae ovaes, circ. 4 lin. longae, dein paulum accrescentes; baccae globosae, calycis laciniis auctis multoties breviores. —Not unfrequent in the forests of the outer hills of Sikkim Himalaya, especially between Khersiong and Punkabarrí, in Balasun valley etc., at 1—4000 feet elevation; also descending occasionally into the Terai.

80. CLIMACANDRA OBOVATA, Miq., will have to be changed into *Cl. littoralis* (*Ardisia littoralis*, Andr. Repos. X, 630). De Candolle merges *A. littoralis* into *A. humilis*, but I think incorrectly.

*Ardisia multiflora*, Miq. and *Ardisia umbellata*, Roxb., (Fl. Ind., I, 582) belong both to the above.

81. AEGICERAS MAJUS, Gært., is *Aeg. corniculata*, Blanco, (Fl. Filip., 70, *Rhizophora corniculata*, L.).

## SAPOTACEÆ.

82. The Indian genera of SAPOTACEÆ might be arranged as follows:—

\* Calycis et corollae lobi isomeri.

(1.) *Chrysophyllum*. Flores 5-8-meri. Stamina 5-8. Staminodia nulla. Ovarii loculi 5-8.

(2.) *Sideroxylon*. Flores 5-meri. Staminodia 5. Ovarii loculi 5-2.

(3.) *Achras*. Flores 6-meri. Stamina 6. Staminodia 6. Ovarii loculi 12.

(4.) *Isonandra*. Flores 4- s. 6-meri. Stamina lobis duplo plura, uniseriata. Staminodia nulla. Ovarii loculi calycis lobis isomeri.

\*\* Calycis et corollae lobi anisomeri. Ovarii loculi tot quot calycis lobi.



(5.) *Payena*. Calycis lobi 4 s. 6 ; corollæ lobi duplo plures. Stamina corollæ lobis duplo pluria, biseriata. Staminodia nulla.

(6.) *Bassia*. Calycis lobi 4 s. 6 ; corollæ lobi 8—14. Stamina corollæ lobis circiter duplo v. triplo pluria, 1—3-seriata: Staminodia nulla.

(7.) *Mimusops*. Calycis lobi 6 v. 8 ; corollæ lobi 2-3-plo plures. Stamina tot quot calycis lobi. Staminodia 6 v. 8.

83. CHRYSOPHYLLUM SUMATRANUM, Miq., (Suppl. Fl. Sumatr. 579) = *Ch. Roxburghii*, G. Don.

84. SAPOTA ? TOMENTOSA, DC., is in my opinion a true *Sideroxylon*.

85. SIDEROXYLON OBOVATUM, Griff., (Not. Dicot., 290) is *S. attenuatum*, DC.

86. KAKOSMANTHUS, Hassk., cannot be separated from *Bassia*, and *Dosyaulus*, Thw., has also been identified with the latter genus by the author himself.

87. Dr. Thwaites pronounced *Isonandra* to be a *Bassia*, but from the conspectus of the genera above given, that genus appears to me to be well founded.

*Bassia caloneura*, Kurz, (in Andam. Rep., p. 41) with chartaceous strongly nerved leaves and 4-lobed calyx is now referable to *Isonandra*.

*Bassia ? hypoleuca* Miq., (Suppl. Fl. Sum., 582) = *Isonandra obovata*, Griff., (Not. Dicot., 293).

*Bassia polyantha*, Wall. ap. DC. is also an *Isonandra*.

88. CERATOPHORUS WIGHTII, Hassk. (Retz., I, 601) is *Payena lucida*, DC. DeCandolle mistook the filaments of the fallen anthers for staminodia, and hence the discrepancy in the number of stamens. The genus might be divided thus :

Sect. 1. *Hexameria*. Calyx 6-partitus ; corollæ lobi et stamina calycis lobis duplo plura. (*P. Griffithii*).

Sect. 2. *Payena*. Calyx 4-partitus ; corollæ lobi et stamina calycis lobis duplo plura.

\* Antheræ pilosæ, (= *Ceratophorus*, Hassk.), *P. Leerii*, (*Ceratoph. Leerii*, Hassk.) et *P. longipetiolata* (*Ceratophorus longipetiolatus*, T. et B.)

\*\* Antheræ glabræ (*Payena*, DC.), (*P. lucida*, *P. paralleloneura*).

89. *Payena paralleloneura*, n. sp.

Arbor ingens, ramulis subtiliter ferrugineo-puberis; folia elliptica ad elliptico-lanceolata, petiolis circ. poll. longis, gracilibus, glabrescentibus, suffulta, breviter acuminata, 3-4 poll. longa, tenui corvacea, glabra, nervis lateralibus tenuibus parallelis sub angulo fere recto divergentibus; flores mediocres, albi, pedunculis circ. poll. longis, minute fulvescente-puberis suffulti, 3-7-ni fasciculati; fasciuli axillares, petioli longitudine v. paulum longiores; calyx minute fulvescente-puberus, 4-partitus, sepalis lato-ovatis, acutis, circ. 3 lin. longis; corolla glaberrima, lobis elliptico-oblongis obtusis; stamina 16, antheris glabris, aristato-mucronatis; ovarium fulvescente pubescens; baccæ ovatæ, pruni magnitudine, apiculatæ, glabræ, 1- raro 2- spermæ.—Pegu. Differs from *P. lucida* by the acute sepals, the bristly-terminated (not beaked) anthers, by the longer petiols and by the nervature of the leaves.

90. *MIMUSOPS INDICA*, (Kurz, in And. Rep. 42, et DC. quoad specim. *Martabanica*).

This is the well-known Andaman bullet-wood, but there are considerable difficulties in giving the tree a proper scientific name. Mr. Bentham has identified it with his *M. Browniana*. The description of the fruit and seed of the Australian *M. Browniana* appears to me to differ considerably from the Andaman species. In the former the fruit is said to be ovoid or almost globular and 1-2 seeded, while in the latter it is decidedly depressed globular (not unlike in shape and size to a wood-apple), 5-6 seeded, and the hilum hardly half the length of the seed. I have unfortunately no specimens from Ceylon, and therefore I am unable to compare my plant with *M. Kauki* L. Bentham, who has seen the Linnean specimens of *M. Kauki*, declares them to be *M. Indica*, &c., (Wight Icon., t. 1587), a common species all over Hindustan. The very short Linnean description, however, represents more the Andaman tree with solitary flowers than the Hindustan tree, which latter is the same as *M. hexandra*, Houb., Corom., Pl. I, 16, t. 15, differing from the former considerably by the 1-seeded, differently shaped, fruits and by the flowers being always two or more together in the axils of the leaves.

*M. Kauki*, Houb., and Miq. Fl. Ind. Bat., II, 1042, is undoubtedly *M. Bojeri*, &c. (? = *M. dissecta*, Hook. Bot. Mag., t. 3157).

*M. Roxburghiana*, Wight, Icon., t. 1588 (excl. synonym. Roxb.) is a species unknown to me; it differs from all those above named by the very slender peduncles, larger flowers and by the shape of the staminodial scales.

*Imbricaria*, Comm., is not generically different from *Mimusops*.

### EBENACEÆ.

#### 91. *Diospyros rhodocalyx*, n. sp.

Arbuscula novellis adpresse pubescentibus; folia oblonga v. ovali-oblonga, rarius obovato-oblonga, retusa v. rarius (in eodem stirpe) obtuse apiculata, graciliter et breviter petiolata, basi acuta v. obtusa, chartacea, magnitudine variabilia, 1—2 v. 3—4 poll. longa, supra glabra et lucida, subtus secus costam plerumque parce pubescentia, nervis et reticulatione laxa utrinque conspicuis; flores 4—meri, parvi, sessiles v. subsessiles, axillares, masculi cymulas brevissimas tomentosas formantes, feminei solitarii; bracteæ lineares, dense fulvo-tomentosæ, breves; calyx dense fulvescenti pubescens, lobis oblongo lanceolatis, obtusiusculis, in floribus femin. major, lobis lato-oblongis, obtusis, basi marginibus plicato-dilatatis, rubro-tinctis; corolla glabra, in masc. vix 2 lin., in femin. 3 lin. fere longa, tubo bullato, lobis 4 brevibus, oblongis; stamina in fl. masc. c. 16, in fem. 8—10, ima basi corollæ inserta; filamenta brevia, barbata; antheræ lineares, acuminatæ; ovarium in masc. rudimentarium, in fem. oblongum, dense fulvo tomentosum, 4-loculare? Siam, Rádbúrí and Kánbúrí (Teysm. in Herb. Bog. No. 6000 and 6007).

In general habit somewhat resembling *D. heterophylla*, Wall., and best placed near *D. tomentosa*, etc., in sect. III, amongst the four-merous species.

#### 92. *Diospyros dasyphylla*, n. sp.

Arbor? ramulis dense fulvescente pubescentibus; folia oblonga ad ovato oblonga, petiolis 1—2 lin. longis, dense fulvo pubescentibus, suffulta, basi rotundata v. subcordata, acuta v. brevissime acuminata, 4—6 poll. longa, chartacea, dum juvenilia longe ciliata, dein subtus et supra secus nervos molliter puberula; flores in alabastro fere 4/5 poll. longi, 4-meri, breviter pedicellati, masculi in cymas breves fulvo-

pubescentes, axillares, v. supra foliorum delapsorum cicatricibus erumpentes, dispositi; bracteæ suborbiculares, puberulæ, ciliatæ, lineam circiter longæ; calyx ferrugineo-pubescentis, usque ad basin fere partitus, lobis rotundatis, obtusis, ciliatis; corollæ tubus adpresse fulvo v. ferrugineo-pubescentis, 3 lin. circiter longus, tubulosus et paulo ampliatus; lobi tubi longitudine, oblongi, acuti, extus canescente velutini; stamina in masc. circiter 16, basi corollæ inserta, filamenta valde inaequalia, nonnulla 1—2 lin. longa, pluria brevissima; antheræ oblongæ, acutæ; ovarii rudimentum fl. masc. fulvo hirsutum; flores feminei et baccæ ignotæ.—Karen hills, Taipo mountains, at 4000 ft. elevation, (Dr. Brandis).

Near *D. densiflora*, Wall.

93. *Diospyros Brandisiana*, n. sp.

Arbor novellis breviter pubescentibus; folia iis *D. chartaceæ* persimilia, petiolis 1—2 lin. longis, puberulis, suffulta, oblonga ad elliptico-oblonga et oblongo-lanceolata, acuminata, basi rotundata v. acuta, chartacea, 4—6—8 poll. longa, adulta glabra v. plerumque secus costas sparse adpresse hirsuta; flores in alabastro 4—5 lin. longi, 5-meri, pedicellis 1—2 lin. longis, subinde elongatis, tomentosis, suffulti, in cymas densiusculas, ramosissimas, minute bracteatas, nigrescenti-brunneas, tomentosas, e ramis ortas v. axillares, dispositi; bracteæ minutæ, oblongo-lanceolatæ, tomentosæ; calyx nigrescente v. atrobrunneo tomentellus, lineam circiter longus, 5-fidus, lobis lineari-lanceolatis, acutis; corollæ adpresse pubescentis tubus  $2\frac{1}{2}$  lin. longus, basin versus subampliatus et vulgo 5-angularis; lobi tubi longitudine, oblongi, obtusi; stamina in masc. circa 16, in fem. ad 5 rudimentaria redacta; filamenta brevissima, pubescentia; antheræ lineares, mucronulatæ, glabræ; ovarium in fl. fem. dense fulvo pubescens, stylo longiusculo, simplice, crasso, terminatum, 10-loculare; baccæ . . . valde immaturæ ovatæ, acuminatæ, brevi-pubescentes. Burma, Dondamee Forests. (Dr. Bandis).

94. *DIOSPYROS OLEIFOLIA*, Wall. ap. DC., Prod. VIII, 239. (nomen nudum).

Arbor mediocris, glabra; folia elliptica ad oblongo-lanceolata, obtuse acuminata, petiolis 2—3 lin. longis suffulta, 3—5 poll. longa, subcoriacea, utrinque lævia et nitida, nervis subtilissimis

impressis et inconspicuis percursa; flores parviusculi, albi, 4-meri, breviter pedicellati, vulgo terni, pedunculis 3—6 lin. longis, subtiliter pubescentibus, axillaribus, suffulti; calyx 3 lin. fere longus, extus glaber, intus dense fulvo-tomentosus, lobis latis acutis; corolla calyx plus quam duplo longior, extus fulvo-tomentosa, tubo amplo et inflato, c. 3-3½ lin. longo, lobis brevibus rotundatis; stamina in fl. masc. c. 20 ima basi corollæ et toro inserta; filamenta inconspicua; antheræ lineares, acuminatæ, c. 2. lin. longæ; ovarii rudimentum fl. masc. minutum, fulvo-pubescentibus; fl. feminei et baccæ ignotæ.—Pegu, (Dr. Brandis), and Java, Wynkoopers Baay (Teysmann). Kayú áráng, Mal.

95. *Diospyros variegata*, n. sp.

Arbor mediocris, glaberrima; folia elliptico-oblonga ad oblonga, sæpius basi sub-inæqualia, petiolis 2—4 lin. longis, crassis, suffulta, acuta ad acuminata, integra, 5—8 poll. longa, chartacea, glabra, nervis subtus prominentibus et reticulatione laxa et conspicua percursa; flores parvi, lutei, 4-meri, in alabastro 4—5 lin. longi, elongati, brevissime pedicellati, terni v. pauci, in cymas axillares breviter petiolatas, minute puberulas, bracteatas, dispositi, et secus ramulos novellos, sæpius adhuc aphyllous, racemum spurium formantes; bractæ latæ, acutiusculæ, puberulæ; calyx puberulus, lobis lato-oblongis, obtusis, c. 2 lin. longis; corolla urceolata, tubus calyx paulum longior, lobis ovatis acutis, tubi longitudine; stamina in fl. masc. c. 16, inæqualia, basi corollæ tubi inserta; filamenta brevia; antheræ lineares, basi cordatæ, acuminatæ, glabræ; fl. feminei et baccæ ignotæ.—Pegu (Dr. Brandis).

96. *Diospyros Burmanica*, n. sp.

Arbor novellis adpresse fulvo-pubescentibus; folia elliptica ad elliptico-oblonga, petiolis 1-1½ poll. longis, puberulis, suffulta, obtusiuscula, breviter acuminata v. obtusa, integra, magis minusve 2½-4 poll. longa, juniora supra tomento tenui fugaci adpersa, dein glabrescentia, subtus dense fulvo-puberula, nervis reticulatione tenui percursa; flores feminei 5-meri, parviusculi, dense fulvo-tomentosi, solitarii pedunculis dense tomentosis, 2—3 lin. longis,

secus ramulos novellos efoliatos, dense fulvo-mentosos, suffulti et sæpius racemos laxos spurios efformantes; flores masc. ignoti; calyx dense fulvo-tomentosus, 3 lin. fere longus, lobis lato-cordato-ovatis, acutiusculis, marginibus recurvis; corolla dense et adpresse fulvo-pubescentis, intus glabra, tubo brevi, loborum longitudine; stamina ad 8 redacta, basi corollæ tubi inserta; antheræ lineari-oblongæ, acutæ; ovarium ovatum, dense fulvo-pubescentis, in stylum brevem crassum attenuatum; stigmata 2, crassa, 2-loba; baccæ poll. circiter crassæ, globosæ, vulgo 4-spermæ, glabræ, calyce aucto sustentæ.—Pegu (Dr. Brandis).

97. MARCREIGHTIA ANDAMANICA, Kurz, (in Rep. Veget. Andam., ed. 2, p. 42) is the female plant of *Maba Sumatrana*, Miq., with somewhat larger and thinner leaves.

#### ACANTHACEÆ.

98. LIMNOPHILA DIFFUSA, Roxb. (Fl. Ind., III, 93) is *Ebermaiera diffusa*.—*Ebermaiera thyrsoides*, N. E., and *E. Zeylanica*, N. E., both belong to the above noted species.

99. NOMAPHILA STRICTA, N. E., and *N. corymbosa*, Bl., will have to be named *Nomaphila pubescens*, (*Justicia pubescens*, Lamk. III., I, 40).—*N. Parishii*, T. And., is hardly more but one of those glandular-pubescent states of *N. pubescens*, which also occur in the more cultivated parts of Java.

100. HEMIAGRAPHIS HIRSUTA, T. And. (*Ruellia hirsuta*, N. E., in Dr. Brod., XI, 148; *Justicia hirsuta*, Vhl., Symb., II, 3, et Enum., I, 122), is in my opinion the very same plant as *Ruellia Blumeana*, N. E. in DC., I, c. 149, and therefore the latter a synonym. Dr. Anderson's *H. confinis* (*R. confinis*, N. E. in DC. I. c. 148) is another synonym, if his identification is correct, what I do not doubt. *H. hirsuta* is a very common plant in the Indian Archipelago, growing not only in moist sunny places, but also in the densest shade of village-bushes and evergreen forests. It resembles to a certain degree *Strobilanthes glaucescens*.

The differences between *Strobilanthes* and *Hemiographis* do not appear to me to be clearly defined, for the number of seeds is not very reliable, and several species of *Strobilanthes*, as for instance *St. flava*, with 8-seeded capsules, should then be referred to *Hemia-*

*graphis*, while another new species *St. phyllostachya*, presently to be described, would remain in *Strobilanthes*, although so nearly allied to *S. flava*, as hardly to admit separation.

101. *Strobilanthes phyllostachya*, n. sp.

Herba perennis, ramosa, 2—3-pedalis, ramis magis minusve glanduloso-hirsutis et glabrescentibus; folia oblonga ad lato-lanceolata, petiolis 2-2½ poll. longis, gracilibus, hirsutis, suffulta, breviter acuminata, basi acuta, crenato-dentata, rigidiuscula, 5—7 poll. longa, utrinque v. supra tantum pilis longiusculis, e cono minuto ortis, rigidis, hirsuta; flores conspicui, aurei, in spicas dense bracteatas, longe pedunculatas, dispositi et paniculam brachiatam glandulo-hirsutam, foliosam, axillarem et terminalem, formantes; folia floralia inferiora foliis caulinis conformia sed minora, superiora bracteiformia, lanceolata, serrata, hirsuta; bracteæ lanceolatae, acuminatae, decussatae, membranaceae, integrae, poll. longae v. longiores, glanduloso-pilosae, albidæ, apice et nervis viridibus; bracteolæ lineares, pilosae et glanduloso-pubescentes; calycis segmenta inæqualiter longa, bracteolis conformia; corolla 1½ poll. fere longa, (tubo brevi sed gracili), extus glabra, intus præcipue fauce et secus filamentorum insertionem pilosa; capsulæ glabræ, 4-spermæ.—Pegu (Dr. Brandis).

102. STROBILANTHES SUMATRANA, Miq. (Fl. Ind., Bat., II, 802)  
= *S. pentstemonoides*, T. And.

103. JUSTICIA ECBOLIUM, L.

I agree with Nees v. Esenbeck, that this species deserves to be retained as a distinct genus. Dr. Anderson has placed it in *Eranthemum*, but it stands there in a very isolated position, differing from all the other species of the genus. The large bracts, 1-seeded capsules and differently shaped corollas appear to me sufficient characters for the genus, which I now propose to call *Ecbolium*. The Neesian character under his genus *Justicia* is a very accurate account of it, so that I have nothing to add to it. Wight figures 2 ovules to each cell, but I cannot confirm this point, as I have no fresh flowering specimens. The species might be called *Ecbol. Linneanum*, including the long series of synonyms mentioned already by Dr. Anderson.

## VERBENACEÆ.

104. *Sphenodesma eryciboides*, n. sp.

Frutex scandens; folia oblonga-lanceolata, acuta, petiolis brevibus, gracilibus, puberulis, suffulta, basi acuta, integra, membranacea, supra glabra, subtus palida et tenuiter pubescentia; flores parviusculi, sed conspicui, nivei, glomerati, racemos axillares formantes et involuero minuto 6-phyllo sustenti; involucri phylla inæqualia, spatulato-lanceolata, tomentosa, calycibus 5—6-dentatis, albidis, extus dense tomentosis, intus dense sericeis, breviora; corollæ limbus 5—6-lobus, lobis oblongis, obtusis, pubescentibus; antheræ 5—6, minutæ; capsulæ calyce tumido inclusæ.—Pegu (Dr. Brandis).

## SCROPHULARIACEÆ.

## OPHIORRHIZIPHYLLON, n. gen.

Calyx 5-fidus, laciniis subulatis. Corolla sub-bilabiata, breviter tubulosa; tubus leviter curvus, sursum inflatus; labium exterius brevius, 3-lobulatum, interius 2-lobulatum, lobulis omnibus rotundatis, obtusis. Stamina fertilia 2, tubo corollæ intus piloso-annulato inserta, longissime exserta; filamenta deflexa, corolla fere duplo longiora; antheræ 2-loculares, loculis discretis. Ovarium 2-loculare, ovulis plurimis axi centrali biseriatim inserta; stylus filiformis, staminum longitudine, longissime exsertus, apice breviter bilobus, lobis reflexis. Capsula oblonga, acutiuscula, sepalorum longitudine, bisulca, 2-ocularis et 2-valvis.—Herba foliis oppositis, floribus racemosis albidis v. rosellis.

The position of the genus is between *Pterostigma* and *Stemodia*.

105. *O. macrobotryum*, n. sp.

Herba 2—3-pedalis, novellis puberulis; folia longe-petiolata, 4—6 poll. longa, lanceolata v. oblongo-lanceolata, utrinque acuminate, integra, membranacea, subtus in costa nervisque puberula, discoloria; petiolus  $\frac{1}{2}$ -2 poll. longus, puberulus; racemi terminales, puberuli, plerumque solitarii v. terni, bracteati; bracteolæ lineares, sursum gradatim subulatæ; flores albidii v. carneo-albidi, brevissime pedicellati; corolla 3 lin. longa, lobis calycinis puberulis paulo longior; stylus et filamenta glabra; capsula 3 lin. longa, glabra.—Karen hills, Taipo-mountains, Thoungyeen. (Dr. Brandis).



*BIGNONIACEÆ.*106. *Spathodea ignea*, n. sp.

Arbor mediocris, novellis sparse puberulis; folia decomposita, pinnis primariis 3—4, secundariis infinis sæpius bipinnatis, sequentibus simpliciter impari-pinnatis; foliola 3—4 poll. longa, oblique oblongo-lanceolata, obtuse acuminata, breviter petiolata, integra, tenuiter chartacea, glabra; flores speciosi, ignei, fasciculati v. breviter racemosi, in foliorum axillis v. frequentius e ramis crassioribus supra foliorum cicatricibus erumpentes; pedunculi et pedicelli puberuli; calyx spathaceus,  $\frac{3}{4}$  poll. longus, puberulus, membranaceus; corolla bipollicaris, campanulato-infundibuliformis, glabra, intus versus basin ad filamentorum insertionem puberula, breviter 5-loba, lobis rotundatis obtusissimis; filamenta glabra, usque ad medium corollæ adnata, filamentum quintum abortivum, breve v. rudimentarium; antheræ faucem attingentes; folliculi immaturi, bipedales, lineares, glabri, apice truncati, valvis coriaceis tenuissime striatis; semina divaricato-bialata, biseriata.—Burma, without locality. (Hb. Dr. Brandis, No. 1357).

*COMMELINACEÆ.*107. *Aneilema spectabile*, n. sp.

Planta perennis, subcaulis; radices elongato-tuberosæ, sursum attenuatæ; folia subradicalia, lato-lanceolata ad lato-linearia, basi rotundata, amplexicaulia, acuminata, 2—5 poll. longa, supra puberula, subtus glabra, caulina multo breviora, solitaria et magis puberula; panicula foliorum longitudine v. paulo longior v. brevior, racemiformis v. raro subramosa, bracteata, radicalis et scapiformis, solitaria v. raro bina, tota cum bracteis dense glanduloso-puberula; bracteæ oblongæ, acuminatæ, semipollicares, amplexicaules et subcymbiformes, florum racemulos laxos foventes; flores exsertæ, cyanescenti-albidi (in sicco cyanei), longe pedicellati; pedicelli stricti, filiformes, glandulosi, c. 2 lin. longi; sepala linearia, 2-2½ lin. longa, acutiuscula, extus glanduloso-puberula; petala sepalis breviora; stamina fertilia forte 2; ovarium 3-loculare, loculis 3-ovulatis; capsulæ maturæ sepala longitudine subæquantes, oblongæ, acutiusculæ, glabræ, 3-loculares, loculis abortu 1—2 spermis; semina parva, lato-ovata ad truncato-oblonga, planiuscula, lacunosorugosa,

pallida.—Burma, Thoungyeen, March, 1862. (Dr. Brandis).—This species will range along with *A. ochraceum*, Dalz.

#### LYCOPODIACEÆ.

108. SELAGINELLA SEMICORDATUM, J. Scott, (in Journal of Agri-Horticult. Society of India. New Ser., vol. I, part 2, p. 261 (1860) is *S. semicordata*, Spring, Enum. *Lycopod.* No. 78 and Monogr. *Lycopod.*, II, 107 (*Lycopod.* Wall. Cat. 137).

*S. implexa*, J. Scott, l. c. p. 262, is identical with *S. tenera*, Spring, Enum. *Lycop.* No. 144 and Monogr. *Lycopod.*, II, 241.

*S. aristatum*, J. Scott, l. c. 262, founded apparently upon *Lycop. aristatum*, Roxb., in Maclell., Calcutt. Journal. Nat. Hist., IV, 473, is unknown to me, and it is impossible to compare the plant with any of Spring's diagnoses, Mr. Scott's description being insufficient in several points.

#### LEMNACEÆ.

109. *Lemna tenera*, n. sp.

Frondiculæ cruciatæ, lanceolatæ ad lineari-lanceolatæ, sæpius subcurvulæ, acuminatæ, basi magis minusve rotundatæ, membranaceæ, subtus (in viro) obsolete trinerves et reticulato-venosæ; radiculæ solitariæ.—Frondiculæ 3—4 lin. longæ, basi lineam circiter latæ; radiculæ vix pollicares.

Pegu, in jungle-swamps of Pazwoon doung valley, rare.

#### ARRANGEMENT FOR THE DISCHARGE OF LONG OVERLAND TELEGRAPH LINES, by LOUIS SCHWENDLER, Esq.

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When organizing more regular and instantaneous telegraphic communication between the Presidency towns of India, and especially between Calcutta and Kurrachee, it was observed that discharges occurred sufficiently strong to affect the relay of the sending station, and giving rise to the so called "return beats." These discharges\* through the relay of the sending station are

\* It is well known that an overland telegraph line acts as a Leyden jar in the same manner as a submarine cable, having, however, only a much smaller capacity on account of the insulating layer (the air between the telegraph wire and surrounding conductors) being very thick. But, though the capacity